explains the mortality in the practice of those who, while they do not actually lower their patients, fail to see that, in a certain proportion of cases, either the disease itself or excessive stimulation exhausts and proves fatal."

The facts upon which these important conclusions rest, Dr. B. states that he hopes to lay before the profession ere long in a more extended form.

8. *Expectant Treatment of Pneumonia in Children.*—M. Blache read, at a late meeting of the French Academy of Medicine, a report on a paper by M. Barthez on this subject.

M. Blache says: "There are enlightened men who have the courage openly and boldly to advocate the principle of an expectant treatment generally in diseases. In their view, the duty of the medical man should be limited to watching over the natural progress of the disease; his art should not blindly and inopportunely interfere with nature. He should be contented with placing his patient in the most perfect hygienic conditions; and having done this, should leave him in the hands of a curative nature. They regard with sorrow those fussy practitioners, who are as busy as flies, and who never leave their patients a moment's repose, incessantly tormenting both them and themselves; forever giving orders, prescribing, bleeding, purging, etc.; in fact, men who are just like a corporal exercising recruits."

The paper of M. Barthez is founded on the observation of 212 cases of pure pneumonia observed during seven years at Hôpital Ste. Eugénie, in children of from 2 to 15 years of age. Two only of these 212 cases were fatal; and they were both cases of double pneumonia. In nearly one-half of these cases, scarcely any medicinal treatment was employed; in a large number, it was insignificant; and in about one-sixth of the whole, it may be called active. The duration of the pneumonia was between ten and fifteen days when the disease was left to itself. Under the expectant method, the convalescence occurred in from five to ten days; but was prolonged under treatment. M. Barthez concludes, with M. Legendre, that pure pneumonia in children habitually terminates favourably.—*British Medical Journal*, Dec. 24, 1864.

9. *Treatment of Chronic Disease of the Lungs by the Inhalation of Atomized Liquids.*—Dr. Morell Mackenzie read a paper (Feb. 14, 1865) before the Royal Medical and Chirurgical Society on this subject. The author, after an elaborate description of the various instruments invented for the purpose of introducing medicine by means of inhalation, enters into an account of the apparatus invented by Dr. Siegle,[1] of Strasbourg, and himself, which he thus describes: It consists of a little kettle with a horizontal spout, in which there is a very fine opening. Placed at right angles to the horizontal spout is a vertical tube which dips down into the kettle, with a spirit-lamp beneath it. As the steam issues from the spout it causes a vacuum in the vertical tube, and the medicated liquid rising up becomes mechanically incorporated in the steam. The dilution of the medicated liquid which takes place is very slight, as the conversion of a drachm of water into steam will take up three drachms of medicated liquid. The temperature of the steam is lowered by the incorporation of the liquid, so that at the end of the cylinder it has only a temperature of about 70°. In this apparatus there is, of course, no current of cold air. The amount of liquid taken up varies —that is, it depends on the amount of heat applied, on the height of the column of liquid, etc. This is not an important defect; but when it is thought desirable to take up a definite quantity of liquid, the author uses the following apparatus: A graduated glass tube, about eight inches high, has from its lower part a fine piece of tubing, which is bent round and up again, and then extends about an inch horizontally, and ends with a minute opening. In the vertical portion of the fine tubing there is a stopcock. The small aperture of the tube is placed at right angles to the spout of the kettle, and as the liquid emerges it becomes incorporated in the steam. By means of the stopcock the amount of liquid which passes from the tube can be regulated, so that the same amount can always be taken up in the same time. Dr. Siegle's simple apparatus is an excel-

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[1] This admirable apparatus has unfortunately been patented by Dr. Siegle.

lent one, and the author stated that he had often used it with great advantage. The author observed that his own atomizer is very simple, and can be used very easily. The liquid is driven from a fine glass pipe on to a projection in a bell-shaped tube, by the descent of a piston. The piston is drawn up without any exertion by a wheel and rack at its upper part, and is forced down by a circular spring which surrounds the cylinder. The apparatus is filled with liquid by a funnel in its top, and all the spray except that which is inhaled passes back into the apparatus. The advantages of his (Dr. Mackenzie's) atomizer are: 1. Its simplicity, requiring only a few turns of a handle to set it in operation. 2. The extremely fine state of subdivision which it effects. 3. The uniform pressure exerted. 4. The fact that the waste liquid returns into the apparatus. 5. The ease with which it can be taken to pieces and cleaned. After enumerating the physicians and physiologists who had worked at the subject on the Continent, the author analyzed the experiments which had been performed by Demarquay, Fournié, Brian, and others, on rabbits and dogs. He then related his own experiments, which had been carried out in conjunction with Dr. Duchesne, of Woodford. After detailing various experiments performed on pigs and dogs, Dr. Mackenzie thus sums up the results: Leaving Demarquay's rabbits out of the question—it having been shown by Claude Bernard that as those animals in their normal state breathe through the nares when their nostrils are covered, and they are made to breathe through the mouth, the conditions are not physiological; and by Fournié that any solution (not atomized) injected into a rabbit's mouth passes into the lungs—there are: 1. Demarquay's and Brian's experiments on dogs 2. His (Dr. Mackenzie's) on pigs and dogs. 3. An experiment performed by Demarquay, in the presence of numerous witnesses, on a woman with a tracheal fistula, in which it was shown that the inhaled liquid penetrated to the trachea, though there was a great obstruction at the upper opening of the larynx. This experiment, which had been previously unsuccessfully performed by Fournié, has since been repeated by Lieber, Schnitzler, and others, with results similar to those obtained by Demarquay. 4. The fact first shown by Bataille, and since by Moura-Bourouillon, the author, and others, that after the inhalation of a coloured atomized solution the sputa remained tinged long after the employment of the laryngoscope could detect any traces of the material used. On the one hand there were an immense number of positive proofs of the penetration of atomized liquids, on the other hand there were a few experiments performed with negative results. It was scarcely necessary to remark that any experiment might be performed—the most simple chemical test employed—in a manner to insure failure. But a few experiments of this sort could have little weight against the mass of evidence on the other side. The author stated that the greatest benefit from this system of therapeutics might be expected and had resulted in bronchitis, asthma, and hæmoptysis. He brought forward twenty-two cases treated between October, 1863, and January, 1864. There were ten cases of bronchitis, six of phthisis, two of hæmoptysis, three of asthma, and one of hooping-cough. The author did not believe that in phthisis the treatment would have a positively curative effect, but was beneficial in cutting short intercurrent bronchitis. Of the twenty-two cases detailed, only two were unable to make use of this curative process. Of the ten cases of bronchitis, eight were cured, one relieved, and one obtained no benefit. The average duration of the time required for curing these cases, though most of them were severe and of long standing, was only fifteen days and a quarter. The shortest time was six days (a severe case, No. 4); the longest forty days. The duration of treatment was not in proportion to the severity of the disease, one mild case requiring twenty-eight days to get well. Of the six patients labouring under consumption, two were unable to use the inhalations on account of the irritation which they caused. Of the remaining four cases, whilst the physical signs did not undergo any material alteration, the local symptoms (expectoration, pain, and cough) were greatly relieved. The general health was much improved in two cases, Nos. 11 and 15; slightly in a third, and not at all in a fourth. In two cases of hæmoptysis, one severe, the other slight, the atomized liquids rapidly stopped the bleeding. In three cases of asthma—one a very severe case, which had obstinately resisted the ordinary treatment—this system of therapeutics soon gave relief. In one case of hooping-cough (in an adult) the inhalations gave immediate relief, and quickly effected a cure. The author stated that during the past year he had used atomized liquids in more than eighty cases of diseases of the lungs, and that he had found the plan of treatment no less successful than was detailed in this paper. The various instruments referred to in the communication were brought before the society, and likewise diagrams illustrating their action and method of employment.

Dr. GIBB said that the subject of the author's paper was one of the highest importance, and in which he took the greatest interest. In the earlier part of his professional career he (Dr. Gibb) had looked forward to the time when some means might be devised for introducing fluid in a minute state of division into the interior of the bronchial tubes, which would prove more certain in its effects than the vapour inhaled from certain substances. The instrument contrived by Dr. Sales Giron seemed to answer the purpose intended, but many others had been contrived since his invention. He had employed one manufactured by Weiss, which readily answered the purpose; yet, as it soon got out of order, he had latterly given a preference to the fluid atomizer of Lewin, of Berlin, which, notwithstanding what the author had stated in favour of Siegle's and his own, he believed the most useful and convenient from its simplicity and readiness of application. In employing Siegle's, the temperature of the stream could not always be relied upon with any amount of adjustment of the cylinder for its diffusion, although it had decided advantages for introducing small quantities of certain agents. From the evidence brought forward by the author, illustrated by experiments of his own and Continental investigators, he had not the slightest doubt that any atomized fluid reached the minutest bronchial tubes and air-cells, and from his own experience of the inhalation of fluid thus atomized or pulverized he was quite satisfied such was the case. With Siegle's atomizer he had caused the inhalation of a solution of the iodide of silver for a few minutes only in a case of rapid phthisis in the second stage of the disease, with profuse expectoration and laryngeal mischief. The effect of this was a general feeling of warmth throughout every part of the chest, and the subsequent diminution of the expectoration. This feeling of warmth so generally diffused, convinced him that the atomized fluid had reached the minutest bronchi. As a palliative in some cases of phthisis, and as likely to diminish the amount of expectoration, the inhalation of atomized fluids would prove useful, but it never could be relied upon as a curative agent in this disease. With regard to bronchitis, the chronic form especially, asthma, and hæmoptysis, his own experience agreed with that of the author, and showed that in many cases the greatest amount of relief could be obtained. Indeed, he had been surprised at the good results which sometimes followed, in the two former especially. He accepted the author's term atomized as preferable to pulverized in its application to fluids, and had no hesitation in adopting it. As furnishing an additional and most useful therapeutic agent in the treatment of laryngeal and chest diseases, the inhalation of certain atomized fluids must be regarded as one of undoubted value, and he (Dr. Gibb) gladly bore testimony in its favour.

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10. *Diphtheria in London.*—Dr. THOMAS HILLIER, in an interesting paper read before the meeting of the British Medical Association in August last, calls attention to some points in relation to this disease which have been forced upon his notice whilst analyzing the cases which came under his care at the hospital for sick children in London.

The more important of these points we shall present to our reader.

Since the beginning of 1857, there have been 85 cases of diphtheria in the hospital, of which 71 were primary, and 14 secondary; of the primary cases 37 or 52 per cent. died, of the secondary 10 or 71 per cent. were fatal. This is a large mortality, which is explained by the circumstance, that the milder cases were treated as out patients, and only the severe ones admitted into the hospital.

The affections to which diphtheria was secondary were, measles in three instances, scarlet fever in two, surgical operations in two, and once to Bright's disease, tubercular meningitis, pneumonia, typhoid fever, chorea, and convulsions, severally.